

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: **Makoto HASEYAMA, et al.**

Group Art Unit: **2829**

Serial Number: **10/670,377**

Examiner: **Emily Y. Chan**

Filed: **September 26, 2003**

Confirmation Number: **6906**

For: **DEVICE TESTING CONTACTOR, METHOD OF PRODUCING THE SAME, DEVICE TESTING CARRIER**

Attorney Docket Number: **990675B**
Customer Number: **38834**

SUBMISSION OF APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

January 17, 2006

Sir:

Applicants submit herewith an Appeal Brief in the above-identified U.S. patent application.

Attached please find a check in the amount of \$500.00 to cover the cost for the Appeal Brief.

If any additional fees are due in connection with this submission, please charge our Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

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THE UNITED STATES PATENT AND TRADEMARK OFFICE
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Appeal No: Unassigned

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THE SAME AND DEVICE TESTING CARRIER**

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APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 17, 2006

Sir:

Applicants appeal the June 15, 2005 rejection of claim 20.

Following the Notice of Appeal filed on November 15, 2005, the following is the Applicants' (now referred to hereinbelow as "appellants") Appeal Brief.

I. REAL PARTY IN INTEREST

The real party in interest is **Fujitsu Limited**, 1-1, Kamikodanaka, 4-chome, Nakahara-ku, Kawasaki-shi, Japan by an assignment recorded in the U.S. Patent and Trademark Office on **June 16, 1999**, at Reel **010049**, Frame **0622** made in the grandparent application Serial No. **01/18/2006 JADD01 00000061 10670377**
09/333,984. **01 FC:1402** **500.00 OP**

II. RELATED APPEALS AND INTERFERENCES

Appellants know of no other appeals or interference proceedings related to the present appeal.

III. STATUS OF CLAIMS

Pending claim 20 stands rejected. No claims are allowed or objected to. The claim on appeal is claim 20.

IV. STATUS OF AMENDMENTS

An amendment was filed under 37 CFR 1.111 on April 19, 2005 in which claim 20 was amended. The list of claims in the Claim Appendix includes claim 20 as last amended.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present claimed invention is directed to a method of testing a semiconductor device by using a contactor.

With respect to claim 20, a method of testing a device (see, *e.g.*, the contactor 10A used for conducting various tests on the semiconductor device 1 in Figs. 1A and 1B; and page 6, lines 23-27), comprising the step of:

electrically connecting electrode pads (see, *e.g.*, connecting pads 15 in Fig. 1A; and page 7, lines 3-6 and lines 13-17) of a device testing contactor (see, *e.g.*, contactor 10A in Figs. 1A

and 1B) to electrodes (see, *e.g.*, electrodes 2 in Fig. 1A; and page 7, lines 3-6 and lines 10-17) of a device (see, *e.g.*, semiconductor device 1 in Figs. 1A and 1B) being tested;

the electrode pads being formed on a membrane-type flexible wiring board (see, *e.g.*, wiring board 11A in Fig. 1B; and page 6, line 31 – page 7, line 3) of the device testing contactor, and being reinforced by a reinforcing member (see, *e.g.*, first reinforcing member 12A in Fig. 1A; and page 7, lines 18-30), and

the device testing contactor comprising the wiring board and the reinforcing member collectively molded and bonded to each other (see, *e.g.*, page 7, line 31 – page 8, line 5).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claim 20 is anticipated by Hembree et al., U.S. Patent No. 6,060,891, (hereinafter being referred to as “Hembree”)?

VII. ARGUMENTS

Claim 20 is rejected under 35 U.S.C. §102 (b) as being anticipated by Hembree.

Claim 20 calls for *electrically connecting electrode pads of a device testing contactor to electrodes of a device being tested; the electrode pads being formed on a membrane-type flexible wiring board of the device testing contactor, and being reinforced by a reinforcing member, and the device testing contactor comprising the wiring board and the reinforcing member collectively molded and bonded to each other.*

The Examiner takes the position that Hembree discloses in figures 4 and 5 and col. 6, lines 50-52 and lines 57-68, a method of testing a device comprising the step of electrically connecting electrode pads (contact member 20) of a device testing contactor (probe card 10) to electrodes (contact locations 15) of a device being tested (semiconductor dice 14); the electrode pads (contact member 20) being formed on a membrane-type flexible wiring board (16) of the device testing contactor (probe card 10), and being reinforced by a reinforcing member (compressible member 28), and the device testing contactor (probe card 10) comprising the wiring board (16) and the reinforcing member (28) collectively molded and bonded to each other.

However, the device testing contactor (probe card 10) taught by Hembree comprises an interconnect substrate 16 and a membrane 18. The interconnect substrate 16 includes patterns of contact members 20 configured to electrically contact the contact locations 15 (figure 4) on the semiconductor dice 14. The membrane 18 physically and electrically attaches the interconnect substrate 16 to a probe card fixture 22 mounted to the testing apparatus (col. 6, lines 5-11).

Clearly, Hembree does not disclose or suggest the appellants' claimed "membrane-type flexible wiring board of the device testing contactor". The interconnect substrate 16 of Hembree is not membrane-type flexible wiring board.

Moreover, Hembree does not disclose or suggest the device testing contactor (probe card 10) comprising the wiring board (16) and the reinforcing member (28) collectively molded and bonded to each other, as called for in claim 20.

Instead, according to Hembree (col. 6, line 65 to col. 7 line 1), the compressible member 28 can be secured to the interconnect substrate 16 and the pressure plate 30 using an adhesive such as silicone. Clearly, according to the teaching of Hembree, the wiring board (16) and the reinforcing member (28) are not collectively molded and bonded.

In contrast to the teaching of Hembree, the appellants disclose that the first reinforcing member 12A bonded to the rear surface of the wiring board 11 is collectively molded with the wiring board as disclosed on pages 7-8 in the specification. The wiring board 11A of the appellants' invention is a membrane-type wiring board with flexibility, as disclosed on page 7, lines 24-25 in the specification.

It is well settled that:

"A claim is anticipated only if each and every element *as set forth in the claim* is found, either expressly or inherently described, in a single prior art reference." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1567, 7 USPQ2d 1057 (Fed. Cir. 1988)."

Accordingly, it is respectfully submitted that Hembree fails to anticipate claim 20, since Hembree fails to disclose, describe or fairly suggest each and every element set forth in claim 20.

More specifically, Hembree fails to disclose the features of claim 20 concerning *the electrode pads being formed on a membrane-type flexible wiring board of the device testing contactor, and being reinforced by a reinforcing member, and the device testing contactor comprising the wiring board and the reinforcing member collectively molded and bonded to each other.*

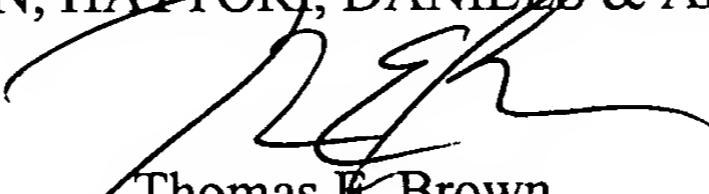
VIII. CONCLUSION

For the above reasons, appellants request that the Board of Patent Appeals and Interferences reverse the Examiner's rejection of claim 20.

In the event this paper is not timely filed, appellants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 50-2866, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Thomas E. Brown
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Enclosures: Claims appendix
Evidence appendix
Related proceedings appendix

CLAIMS APPENDIX

Claims 1 – 19 (Cancelled).

Claim 20 (Previously Presented): A method of testing a device, comprising the step of:
electrically connecting electrode pads of a device testing contactor to electrodes of a
device being tested;
the electrode pads being formed on a membrane-type flexible wiring board of the device
testing contactor, and being reinforced by a reinforcing member, and
the device testing contactor comprising the wiring board and the reinforcing member
collectively molded and bonded to each other.

EVIDENCE APPENDIX

No evidence under 37 C.F.R. § 41.37(c)(1)(ix) is submitted.

RELATED PROCEEDING APPENDIX

No decisions under 37 C.F.R. § 41.37(c)(1)(x) are rendered.